Abstract

[0129] Thus, as shown by an exact electrodynamic computation of EMBF and the estimations described above of the velocity of turbulent flows arising due to their effect, application of amplitude- and frequency-modulated helically traveling (rotating and axially traveling) electromagnetic fields in metallurgical and chemical technologies and foundry can considerably increase the hydraulic efficiency of MHD facilities, intensify the processes of heat and mass transfer in technological plants, significantly increase their productivity, considerably decrease energy consumption for the production of metals, alloys, cast articles, and chemical products, and improve their quality.